**SEAN C. NEWCOMER, Ph.D.**

Curriculum Vitae

Department of Kinesiology Telephone: (760) 750-7359

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San Marcos, CA 92096-001

## ACADEMIC APPOINTMENTS

2013 – current **California State University San Marcos**

Assistant Professor, Kinesiology

2013 – current **Purdue University**

Adjunct Professor, Health and Kinesiology

2008 –2012 **Purdue University**

Assistant Professor, Health and Kinesiology

2004 –2007 **University of Missouri**

Post Doctoral Fellow, Biomedical Sciences

# EDUCATION

2004 **Pennsylvania State University**

Ph.D. in Kinesiology (Minor Gerontology)

Dissertation Advisor: David Proctor, Ph.D.

Dissertation Title: Limb differences in vascular function: effects of age and endurance training

1996 **Humboldt State University**

M.S. in Kinesiology

Thesis Advisor: Susan MacConnie

Thesis Title: Aerobic capacity of Humboldt County male surfers

1994 **University of Oregon**

B.S. in Exercise and Movement Sciences

### TEACHING

**Instruction**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Term** | **Year** | **Course Number: Title** | **Students** | **Course Evaluations:**  **Instructor, Course** |
| *California State University San Marcos* | | | | |
| Spring | 2015 | 426:Exercise Physiology for Special Pop | 34 | 4.9, 4.9 |
| Spring | 2015 | 426:Exercise Physiology for Special Pop | 21 | 5.0, 4.9 |
| Spring | 2015 | 326: Introductory Exercise Physiology | 38 | 4.9, 4.9 |
| Spring | 2015 | 326: Introductory Exercise Physiology Lab | 38 | 4.9, 4.9 |
| Fall | 2014 | 426:Exercise Physiology for Special Pop | 31 | 4.9, 5.0 |
| Fall | 2014 | 326: Introductory Exercise Physiology | 42 | 4.9, 5.0 |
| Fall | 2014 | 326: Introductory Exercise Physiology Lab | 42 | 4.9, 5.0 |
| Spring | 2014 | 426:Exercise Physiology for Special Pop | 40 | 4.8, 4.9 |
| Spring | 2014 | 326: Introductory Exercise Physiology | 43 | 5.0, 4.9 |
| Spring | 2014 | 326: Introductory Exercise Physiology Lab | 43 | 5.0, 5.0 |
| Fall | 2013 | 426:Exercise Physiology for Special Pop | 17 | 5.0, 4.9 |
| Fall | 2013 | 326: Introductory Exercise Physiology | 38 | 5.0, 5.0 |
| Fall | 2013 | 326: Introductory Exercise Physiology Lab | 38 | 5.0, 5.0 |
| Spring | 2013 | 326: Introductory Exercise Physiology | 31 | 5.0, 5.0 |
| Spring | 2013 | 326: Introductory Exercise Physiology Lab | 31 | 5.0. 5.0 |
| *Purdue University* | | | | |
| Spring | 2012 | 468: Advanced Exercise Physiology | 56 | 4.6, 4.5 |
| Fall | 2011 | 468: Advanced Exercise Physiology | 23 | 4.9, 4.7 |
| Fall | 2011 | 668: Seminar in Exercise Physiology | 7 | 4.8, 4.4 |
| Spring | 2011 | 468: Advanced Exercise Physiology | 67 | 4.7, 4.6 |
| Fall | 2010 | 468: Advanced Exercise Physiology | 22 | 4.9, 4.6 |
| Spring | 2010 | 468: Advanced Exercise Physiology | 34 | 4.7, 4.4 |
| Spring | 2010 | 368: Exercise Physiology I | 73 | 4.8, 4.6 |
| Fall | 2009 | 368: Exercise Physiology I | 71 | 4.6, 4.3 |
| Fall | 2009 | 668: Seminar in Exercise Physiology | 7 | 4.5, 4.3 |
| Spring | 2009 | 468: Advanced Exercise Physiology | 45 | 4.9, 4.7 |
| Fall | 2008 | 468: Advanced Exercise Physiology | 35 | 4.8, 4.5 |
| Spring | 2008 | 668: Seminar in Exercise Physiology | 7 | 4.2, 4.2 |

**Graduate Mentoring**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student** | **Degree/Date** | **Specialization** | **Instructional Role** |
| **Project Title** | | |
| **Doctoral Students** | | | |
| A. Blaize | Ph.D./2014 | Exercise Physiology | Chair |
| *The impact of maternal exercise during pregnancy on cardiovascular health in rodent and swine offspring* | | |
| F. He | Ph.D./2013 | Exercise Physiology | Committee Member |
| *Antioxidant supplementation, muscle damage, oxidative stress, and leukocyte apoptosis* | | |
| M. Bahls | Ph.D./2013 | Exercise Physiology | Chair |
| *The effects of maternal exercise during pregnancy on offspring vascular function in swine* | | |
| J. Bell | Ph.D./2012 | Exercise Physiology | Chair |
| *Peripheral arterial disease in spinal cord injured individuals* | | |
| B. Roseguini | Ph.D./2011 | Biomedical Sciences | External Committee Member (University Missouri) |
| *Acute and chronic adaptations to intermittent pneumatic leg compression* | | |
| B. Johnson | Ph.D./2011 | Exercise Physiology | External Committee Member (Indiana University) |
| *Role of antioxidants in prevention of acute endothelial dysfunction from hemodynamic interventions* | | |
| E. Weinheimer | Ph.D./2011 | Foods and Nutrition | Committee Member |
| *Effects of whey protein supplementation and exercise training on body composition and indices of metabolic syndrome in middle-aged overweight and obese* | | |
| M. Markofski | Ph.D./2010 | Exercise Physiology | Committee Member |
| *Potential anti-inflammatory effects of exercise training with and without energy restriction-induced fat loss* | | |
| J. Padilla | Ph.D./2008 | Exercise Physiology | External Committee Member (Indiana University) |
| *The relationship between shear stress and flow mediated dilation in low and moderate risk populations* | | |
|  | | | |
| **Masters Students (thesis track)** | | | |
| A. Phillips | M.S./2013 | Nutritional Sciences | Committee Member |
| *Impact of high calcium intake from calcium carbonate or dairy on coronary artery calcification and disease burden in Ossabaw Miniature Swine* | | |
| E. Breslin | M.S./2013 | Exercise Physiology | Chair |
| *No impact of maternal exercise during pregnancy on rat offspring physical activity and food consumption* | | |
| P. Taheripour | M.S./2012 | Exercise Physiology | Chair |
| *Impact of excess weight gestational and post-weaning energy intake on vascular function of swine offspring* | | |
| R. Sheldon | M.S./2012 | Exercise Physiology | Chair |
| *Acute impact of intermittent pneumatic leg compression frequency on limb hemodynamics and vascular function in humans* | | |
| K. Foust | M.S./2011 | Animal Sciences | Committee Member |
| *The influence of maternal exercise on gene expression in the liver of porcine offspring* | | |
| M. Bahls | M.S./2010 | Exercise Physiology | Chair |
| *Influence of gene expression on the development and progression of atherosclerosis* | | |
| D. Sitar | M.S./2010 | Exercise Physiology | Chair |
| *The effects of endothelial upright posture on lower extremity endothelial cell function* | | |
| D. Beiser | M.S./2009 | Exercise Physiology | Committee Member |
| *Carbohydrate supplementation during prolonged intermittent exercise in endurance trained women* | | |

# Undergraduate Interns and Research Assistants

|  |  |  |
| --- | --- | --- |
| **Year** | **Number** | **Students Names** |
| 2015 | 19 | Michelle Bravo, Jean Aguilar,Vuk Ekmecic, Jenny Lou Cardinal, Thomas Cleveland, Christine LaLanne, Kevin Valdez, Aaron Galutera, Ning Jia, Nathaniel Navarro, Joseph Moon, Zach Tieger, Ryan Martineau, Joanne Cayabyab, Michael Cannady, Madison Silvas, Brian Cisneros, Danica Taylor, Maya Saulino |
| 2014 | 23 | Ross Edmunds, Austin Reaves, Alyzza Demesa, Vinnie Bello, Erik Tolentino, Ashlee Clattenburg, Chelsea Marie Peters, Yusef Tahiru, Cassaundra Bostwick, Jerry Pham, Kelsey DeValk, Michelle Bravo, Madison Silvas, Makenzie Stade, Andrea Alonte, Sid Robinson, Brenda Guzman, Amy Clark, Vuk Ekmecic, Stephanie Smith, Jenna Porter, Sara Gharabaghli, Samantha Namm |
| 2013 | 8 | Ross Edmonds, Joseph Nichols, Stephanie Griswold, Jenna Porter, Rebecca Krogstad **Former CSUSM Students** (Rachael Gallant, Idalia Flores, Holly McKinnon) |
| 2012 | 11 | Courtney Yaggi, Casey Hayes, Meganne Rueter, Jessica Rosa, Jennifer Wagner,  Charlotte Hounsome, Jessica Rosa, Erica Zartman, Leigha Thompson, Spencer Harstead, Celina Cheng |
| 2011 | 9 | Pardis Taheripour, Kerry Clifford, Katie Hudson, David Maurer, Alison Dosmann, Christian Sua, Annie Hudson, Christian Ordaz, Mollie Semmer |
| 2010 | 10 | Ryan Sheldon, Brogan Bahler, Pardis Taheripour, Katie Hudson, Kerry Clifford, Amanda Gipson, Christian Ordaz, Sam Yap, Amanda Nading, David Mauer |
| 2009 | 9 | Cameron West, Ryan Sheldon, David Maurer, Ian Skarbek, Megan Dubenetzky, Christopher Kapp, Brittany Bohling, Abby Stroup, Katie Hudson |
| 2008 | 2 | Lindsey Eldridge, Ryan Sheldon |

**RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITY**

**Published Refereed Publications**

*Name in Italics notes* u*ndergraduate* *or graduate student*

*Blaize, N., Breslin, E.*, Donkin, S.S., Cabot, R., Pearson, K.J., and **Newcomer, S.C.** (2015) Maternal exercise does not significantly alter adult rat offspring vascular function. *Medicine and Science in Sports and Exercise.*

*Phillips-Eakley, A.K., McKenney, M., Bahls, M.,* **Newcomer, S.C.,** Radcliffe, J.S., Wastney, M., VanAlstine, W., Alloosh, M., Martin, B., Sturek, M., and Weaver, C. (2015). Effects of high calcium diet on coronary artery disease in Ossabaw miniature swine with Metabolic Syndrome. *Journal of American Heart Association.*

*Blaize, N., Zartman, E., Biel, T.,* Goergen, C.*,* Van Alstine, W., Cabot, R., and **Newcomer, S.C. (**2015). Impact of maternal exercise during pregnancy on coronary and femoral artery vascular function and atherosclerotic lesion formation in high fat fed swine offspring. *Gynecology and Obstetrics* 2(1): 001.

*Taheripour, P., DeFord, M.A., Lantz, E. J.,* Donkin, S.S., Ajuwon, K., and **Newcomer, S.C.** (2014) Impact of excessive gestational and post-weaning energy intake on vascular function of swine offspring. *BMC Pregnancy and Childbirth* 14(405):1-9.

Camarillo, I., *Clah, L., Zheng, W., Zhou, X., Larrick, B., Blaize, N., Breslin, E., Patel, N., Johnson, D.,* Teegarden, D., Donkin, S., Gavin, T., and **Newcomer, S**. (2014) Maternal exercise during pregnancy reduces risk of mammary tumorgenesis in rat offspring. *European Journal of Cancer Prevention* 23(6):502-505.

*Bahls, M*., *Sheldon, R.D., Taheripour, P. , Clifford, K.A., Foust, K.B., Breslin, E.D.,* Marchant-Forde, J.N., Cabot, R.A., Bidwell, C.A. , and **Newcomer, S.C.** (2014) Maternal exercise during pregnancy in swine alters vascular smooth muscle relaxation in offspring. *Experimental Physiology* 99(1): 205-219.

*Sheldon, R.D.,* Roseguini, B.T., Laughlin, M.H., and **Newcomer, S.C.** (2013) New insights in the physiological basis for intermittent pneumatic limb compression as a therapy strategy for peripheral artery disease. *Journal of Vascular Surgery* 58(6): 1688-1696.

*Bahls, M.,* Bidwell, C.A., Hu, J. Tellez, A., Kaluza, G.L., Granada, J.F., Kueger, C.G., Reed, J.S., Laughlin, M.H., VanAlstine, W.G., and **Newcomer, S.C**. (2013) Gene expression differences during the heterogeneous progression of peripheral atherosclerosis in familial hypercholesterolemic swine. *BMC Genomics* 14(443).

Claxton, L.J., Haddad, J.M., *Ponto, K., Ryu, J.H.*, & **Newcomer, S.** (2013) Newly standing infants increase postural stability when performing a supra-postural task. *PlosOne* 8(8)*.*

*Johnson, B.D*., Mather, K.J., **Newcomer, S.C**. Mickleborough, T.D., and Wallace, J.P. (2013) Vitamin C prevents the acute decline of flow-mediated dilation following altered shear rate patterns. *Applied Physiology, Nutrition, and Metabolism* 38(3): 268-274.

*Bell, J.,* Chen, D., *Bahls, M*., and **Newcomer, S.C.** (2013) Altered hemodynamics in lower extremity arteries of spinal cord injured individuals are not strongly associated with peripheral arterial disease. *Journal of Spinal Cord Medicine* 36(2):104-111.

*Johnson, B.D*., Mather, K.J., **Newcomer, S.C**. Mickleborough, T.D., and Wallace, J.P. (2012) Alterations of brachial artery shear rate profiles during lower body exercise influences post-exercise flow-mediated dilation: contribution of oxidative stress. *Cardiovascular Ultrasound* 10(34):1-11.

*Sheldon, R.D., Roseguini, B.T.,* Thyfault, J.P., Crist, B.D., Laughlin, M.H., and **Newcomer, S.C.** (2012) Acute impact of intermittent pneumatic leg compression frequency on limb hemodynamics, vascular function, and skeletal muscle gene expression in humans. *Journal of Applied Physiology.* 112:2099-2109.

*Roseguini, B.T.,* Arce-Esquivel, A.A., **Newcomer, S.C.**, Yang, H.T., Terjung, R., and Laughlin, M.H. (2012) Intermittent pneumatic leg compressions enhance muscle performance and blood flow in a model of peripheral arterial insufficiency.*Journal of Applied Physiology.* 112:1556-1563.

**Newcomer, S.C.**, *Taheripour, P., Bahls, M., Sheldon, R.S. Foust, K.*, and Cabot, R. (2012)

Impact of porcine maternal aerobic exercise training during pregnancy on endothelial cell

function of offspring at birth. *Journal of* *Developmental Origins of Health and Disease.* Feb;

3(1): 4-9.

*Roseguini, B.T.,* Arce-Esquivel, A.A., **Newcomer, S.C.,** & Laughlin, M.H. (2011) Impact of a

single session of intermittent pneumatic leg compression on skeletal muscle and isolated artery

gene expression in rats. *American* *Journal of* *Physiology (Regulatory, Integrative, and*

*Comparative Physiology).* Dec; 301:R1658-R1668.

*Bahls, M.,* Bidwell, C., Hu, J., Krueger, C., Reed, J., Tellez, A., Kaluza, G., Granada, J., Van

Alstine, W., and **Newcomer, S.C.** (2011) Genetic heterogeneity in healthy brachial and femoral

arteries of Rapacz swine influences atherosusceptibility. *Physiological Genomics* 43:781-88.

*Bell, J., Bahls, M*., Chen, D., and **Newcomer, S.C. (**2011) Lower ankle-brachial index and

greater normalized intima media thickness in lower extremity arteries of spinal cord injured

individuals. *American* *Journal of* *Physiology* (*Heart and Circulatory Physiology)* 301: H766-

H772*.*

**Newcomer, S.C.**, Thijssen, D.H.J., and Green, D.J. (2011) Effects of exercise on endothelium and endothelium/smooth muscle cross talk: Role of exercise-induced hemodynamics. *Journal of Applied Physiology* 111:311-20.

**Newcomer, S.C.** and Padilla, J. (2011) Racket sports as a model of studying vascular

adaptation: A comeback after a quarter of a century. *Journal of Applied Physiology*

110(5):1156-7*.*

Bender S.B., **Newcomer S.C.**, and Laughlin M.H. (2011) Differential vulnerability of skeletal

muscle feed arteries to dysfunction in insulin resistance: impact of fiber type and daily activity.

*American Journal of Physiology (Heart* *and Circulatory* *Physiology).* 300(4):H1434-41.

*Roseguini, B*., *Sheldon, R., Stroup, A.,* *Bell, J., Maurer, D.,* Crist, B., Laughlin, M., and **Newcomer, S.C**. (2010) Impact of chronic intermittent compressions on forearm blood flow capacity in humans. *European Journal of Applied Physiology* . 111(3):509-519

Padilla, J., Simmons, G.H., **Newcomer, S.C.**, Laughlin, M.H. (2010) Relationship between

brachial and femoral artery endothelial vasomotor function/phenotype in pigs. *Experimental*

*Biology and Medicine.* 235(11):1287-1291.

Padilla, J., **Newcomer, S.C.**, Simmons, G.H., Kreutzer, K.V., and Laughlin, M.H. (2010) Long-term exercise training does not alter brachial and femoral artery vasomotor function and endothelial phenotype in healthy pigs. *American Journal of Physiology (Heart and Circulatory Physiology)* 299:H379-385.

*Roseguini, B.T., Soylu, S.M*., Whyte, J., Yang, H.T., **Newcomer, S.C.**, and Laughlin, M.H. (2010) Intermittent pneumatic leg compressions acutely up-regulates VEGF and MCP-1 expression in skeletal muscle. *American Journal of* *Physiology (Heart and Circulatory Physiology)* 298:H1991-2000.

Padilla, J., *Young, C.N*., Simmons, G.H., Deo, S.H., **Newcomer, S.C**., Sullivan, J.P., Laughlin, M.H., and Fadel, P.J. (2010) Increased muscle sympathetic nerve activity acutely alters conduit artery shear rate patterns. *American Journal of Physiology (Heart and Circulatory Physiology).* Apr; 298(4): H1128-35.

Padilla, J., *Sheldon. R.D*., *Sitar, D*, and **Newcomer, S.C.** (2009). Impact of acute exposure to increased hydrostatic pressure and reduced shear rate on conduit artery endothelial function: a limb specific response. *American* *Journal of Physiology (Heart and Circulatory Physiology)*. Sept; 297(3): H1103-8.

*Tinken, T.M.*, Thijssen, D.H.J., Hopkins, N., Black, M.A., Dawson, E.A., **Newcomer, S.C.,** Laughlin, M.H., Cable, N.T., and Green, D.J. (2009). Impact of shear rate modulation on vascular endothelial function in humans. *Hypertension*. Aug; 54(2): 278-285.

*Padilla, J*., *Johnson, B.D*., **Newcomer, S.C.**, *Wilhite, D.P*., Mickleborough, T.D., Fly, A.D., Mather, K.J., and Wallace, J.P. (2009). Adjusting flow-mediated dilation for shear stress stimulus allows demonstration of endothelial dysfunction in a population with moderate cardiovascular risk. *Journal of Vascular Research*. June; 46(6): 592-600.

*Padilla, J*., *Johnson, B.D.*, **Newcomer, S.C.**, *Wilhite, D.P*., Mickleborough, T.D., Fly, A.D., Mather, K.J., and Wallace, J.P. (2008). Normalization of flow mediated dilation to shear stress area under the curve eliminates the impact of variable hyperemia. *Cardiovascular Ultrasound.* Sept; 6(44): 1-10.

**Newcomer, S.C.,** *Taylor, J.C*., McAllister, R.M and Laughlin, M.H. (2008). Effects of chronic nitric oxide synthase inhibition on endothelium-dependent and -independent relaxation in swine forelimb and hindlimb vasculatures. *Endothelium*. Jan-Apr; 15(1-2):17-31.

**Newcomer, S.C.,** *Sauder, C.L., Kuipers, N.T.*, Laughlin, M.H. and Ray, C.A. (2008). Effects of

posture on shear rates in human brachial and superficial femoral arteries. *American* *Journal of*

*Physiology (Heart and Circulatory* *Physiology)*. Apr; 294(4): H1833-9.

Laughlin, M.H., **Newcomer, S.C.** and Bender, S.B. (2008). Importance of hemodynamic signals for exercise-induced changes in endothelial cell phenotype. *Journal of Applied Physiology.*  Mar; 104(3): 588-600.

McAllister, R.M., **Newcomer, S.C.**, Pope, E.R. Turk, J.R. and Laughlin, M.H. (2008). Effects of chronic nitric oxide synthase inhibition on responses to acute exercise in swine. *Journal of Applied Physiology.* Jan; 104(1):186-97.

McAllister, R.M., **Newcomer, S.C.**, and Laughlin M.H. (2008). Vascular nitric oxide: effects of exercise training. *Applied Physiology, Nutrition, and Metabolism*. Jan; 33: 173-178.

## *Reifenberger, M.S*., Turk, J.R., Newcomer, S.C., Booth, F.W. and Laughlin, M.H. (2007).

## Perivascular fat alters reactivity of coronary artery: effects of diet and exercise. *Medicine and*

## *Science in Sports and Exercise.* Dec; 39(12): 2125-34.

**Newcomer, S.C.**, *Taylor, J.C*., Bowles, D.K. and Laughlin, M.H. (2007). Endothelium-dependent and –independent relaxation in the forelimb and hindlimb vasculature of swine. *Comparative Biochemistry and Physiology*. Oct; 148(2):292-300.

*Ingram, D.G.*, **Newcomer, S.C.**, Price, E, *Eklund, K*, McAllister, R, and Laughlin, M.H. (2007). Chronic nitric oxide synthase inhibition blunts endothelium-dependent function of conduit

coronary arteries, not arterioles. *American Journal of Physiology (Heart and Circulatory Physiology)*. June; 293(6): H2798-808.

## Proctor, D.N. and Newcomer, S.C. (2006). Is there a difference in vascular reactivity of the arms and legs? *Medicine and Science in Sports and Exercise.* October; 38(10): 1819-1828.

*Koch, D.W*., **Newcomer, S.C.**, and Proctor, D.N. (2005). Blood flow to exercising limbs varies with age and sex. *Canadian Journal of Applied Physiology.* October; 30(5):554-575.

**Newcomer, S.C.**, Leuenberger, U.A., Hogeman, C.S., and Proctor, D.N. (2005). Heterogeneous vasodilator responses of human limbs: influence of age and habitual endurance training. *American Journal of Physiology (Heart and Circulatory Physiology).* July; 289(1):H308-H315.

***Newcomer, S.C.***, Hogeman, C.S., Handly, B.D., Leuenberger, U.A., and Proctor, D.N. (2004). Different vasodilator responses of human arms and legs. *Journal of Physiology.* May; 556(3):1001-1011.

Proctor, D.N., *Koch, D.W.,* ***Newcomer, S.C.****, Le, K.U*., Smithmyer, S.L., and Leuenberger, U.A. (2004). Leg blood flow and VO2 during peak cycle exercise in younger and older women. *Medicine and Science in Sports and Exercise.* April; 36(4):623-631.

Proctor, D.N., *Koch, D.W.,* ***Newcomer, S.C.****, Le, K.U*., and Leuenberger, U.A. (2003). Impaired leg vasodilation during dynamic exercise in healthy older women. *Journal of Applied Physiology.* July; 95:1963-70.

Proctor, D., ***Newcomer, S.****, Koch, D. Le, K*., Maclean, D., and Leuenberger, U. (2003). Leg blood flow during submaximal cycle ergometry is not reduced in healthy older normally active men. *Journal of Applied Physiology.* May; 94(5):1859-69.

Richardson, R.S., **Newcomer, S.C.**, and Noyszewski E.A. (2001). Skeletal muscle intracellular PO2 assessed by myoglobin desaturation: response to graded exercise. *Journal of Applied Physiology.* Dec; 91(6):2679-2685.

**In Press Refereed Publications**

*Blaize, N.* Pearson, K.J., and **Newcomer, S.C.** Impact of maternal exercise during pregnancy on offspring chronic disease susceptibility. *Exercise and Sport Sciences Reviews.*

*Sheldon, R.D., Blaize, A. N., Fletcher, J.A.,* Donkin, S., **Newcomer, S.C.**, and Rector, R.S. Gestational exercise protects adult male offspring from high-fat diet induced hepatic steatosis. *Journal of Hepatology*

**Submitted Refereed Publications**

*Bravo, M.M.,* Cummins, K., Nessler, J.A., and **Newcomer, S.C***.* Heart rate response of high school students participating in surfing physical education. *Journal of Strength and Conditioning Research.*

Nessler, J.A., Silvas, M., Carpenter, S., and **Newcomer S.C.** Arm motion during simulated surfboard paddling is altered by wearing a wetsuit. *PlosOne*

**In Preparation Publications**

Thijssen, D.H.J., Schreuder, T.H.A., **Newcomer, S.C.**, Laughlin, M.H., Hopman, M.T.E., and Green, D.J. Impact of 2-weeks continuous increase in retrograde shear stress on conduit artery vasomotor function and structure in young and old men.

*Furness, J.* Hing, W., **Newcomer, S.C.**, Sheppard, J.M., and Climstein, M. Physiological profile of competitive and recreational surfers.

# Book Chapters

\*McAllister, R.M., **Newcomer, S.C**., and Laughlin, M.H. (2007). Vascular Nitric Oxide: Effects

of Physical Activity, Benefits for Health, In, Adaptation Biology and Medicine: Health

Potentials. Volume 5, Pgs 51-58. Narossa Publishing House. New Delhi, India.

## Conference Presentations

Nessler, J.A., Silvas, M.N., and **Newcomer, S.C.** (2015,) Wearing a wetsuit alters arm

motion during simulated surfboard paddling. Presented at American Society of Biomechanists

[Abstract published in ] ***Poster***

Bravo, M.M.,Cummins, K., Nessler, J.A., and **Newcomer, S.C***.* (2015, June) Heart rate response

of high school students participating in surfing physical education. Presented at American

College of Sports Medicine National Meeting, San Diego, CA. [Abstract published in *Medicine*

*and Science* *in Sport and* *Exercise*, Supplement ] ***Poster***

Silvas, M.N., Howden, M.E., Mandel, E.K., Nessler, J.A., and **Newcomer, S.C.** (2015, June)

Knee extension and flexion strength in recreational surfers. Presented at American

College of Sports Medicine National Meeting, San Diego, CA. [Abstract published in *Medicine*

*and Science* *in Sport and* *Exercise*, Supplement ] ***Poster***

Pham, J.A., **Newcomer, S.C.**, and Nessler, J.A. (2015, June) A comparison of balance and

postural sway in surfers vs. non surfers. Presented at American College of Sports Medicine

National Meeting, San Diego, CA. [Abstract published in *Medicine* *and Science* *in Sport and*

*Exercise*, Supplement ] ***Poster***

Zheng, W., Camarillo, I., Clah, L., Zhou, X., Larrick, B., Blaize, N., Breslin, E., Patel, N.,

Johnson, D., Donkin, S., Gavin, T., **Newcomer, S.***,* and Teegarden, D. (April 2014) Maternal

exercise during pregnancy reduces risk of mammary tumorgenesis in rat offspring. Presented at

Experimental Biology Annual Meeting, San Diego, CA. [Abstract published in *FASEB* *Journal*

28: 886.1, 2014] **Oral**

Blaize, N., Zartman, E.,Cabot, R., and **Newcomer, S.C.** Effects of maternal exercise during

pregnancy on coronary artery vascular function in high fat fed swine offspring. (2014, April)

Presented at ExperimentalBiology Annual Meeting, San Diego, CA. [Abstract published

in *FASEB* *Journal* 28: 886.2, 2014] **Oral**

May, L.E., Barrera, D., **Newcomer, S.,** and Agbas, A.B. (2014, April) Maternal exercise

increases energy efficiency in fetal hearts. Presented at ExperimentalBiology Annual Meeting,

San Diego, CA. [Abstract published in *FASEB* *Journal* 28: 886.4, 2014] **Oral**

Phillips, A., Martin, B., Wastney, M., Jackson, G., Radcliffe, S., Van Alstine, W., McKenney,

M., Bahls, M., **Newcomer, S.**, Sturek, M., and Weaver, C. (2013, November) Calcium intake

and source effects on soft tissue calcification in Ossabaw Miniature Swine. Presented at

American Heart Association National Conference ***Poster***

Phillips, A., McKenney, M., Bahls, M., **Newcomer, S.**, Radcliffe, S., Van Alstine, W., Jackson,

G., Wastney, M., Martin, B., Sturek, M., and Weaver, C. (2013, October) Impact of high calcium

intake from carbonate or dairy on cardiovascular function and the progression of coronary artery

disease in Ossabaw miniature swine. Presented at American Society of Bone and Mineral

Research ***Poster***

Blaize, N., Donkin, S.S., Cabot, R., and **Newcomer, S.C.** (2013, June) Maternal exercise during

pregnancy does not influence glucose clearance or vascular function in adult offspring.

Presented at American College of Sports Medicine National Meeting, Indianapolis, IN. [Abstract

published in *Medicine and Science in Sport and* *Exercise*, Supplement 45(5):27, 2013] ***Poster***

Johnson, B.D., Mather, K.J., **Newcomer, S.C.**, Mickleborough, M.T., and Wallace, J.P.,

(2012, October). Post exercise flow-mediated dilation is influenced by retrograde and oscillatory

shear. Presented at Integrative Biology of Exercise Meeting, Westminster, CO. [Abstract

published in ]***Poster***

Johnson, B.D., Mather, K.J., **Newcomer, S.C.**, Mickleborough, M.T., and Wallace, J.P., (2012,

June). Vitamin C prevents attenuation of flow-mediated dilation following exercise with

augmented oscillatory and retrograde shear. Presented at American College of Sports Medicine

National Meeting, San Francisco, CA. [Abstract published in *Medicine and Science in Sport and*

*Exercise*, Supplement 44(5):586, 2012] ***Poster***

Taheripour, P., Ajuwon, K.M., Donkin, S.S., Sheldon, R.D., Bahls, M., Arentson, E.J.,

Ragland, D., and **Newcomer, S.C.** (2012, April). Impact of maternal and postnatal nutrition on

femoral artery vascular function of offspring.Presented at ExperimentalBiology Annual

Meeting, San Diego, CA. [Abstract published in *FASEB* *Journal* 26: 829.2, 2012] ***Poster***

Johnson, B.D., Mathers, K.J., **Newcomer, S.C**., Mickleborough, M.T., and Wallace, J.P. (2012,

April). Vitamin C prevents attenuation of flow-mediated dilation due to acutely altered SR

patterns. Presented at ExperimentalBiology Annual Meeting, San Diego, CA. [Abstract

published in *FASEB**Journal 26*: 853.26, 2012] ***Poster***

Sheldon, R.D., Roseguini, B.T., Laughlin, M.H., and **Newcomer, S.C.** (2012, April). Acute

effects of intermittent pneumatic compression-induced hemodynamics on vascular function in

humans. Presented at ExperimentalBiology Annual Meeting, San Diego, CA. [Abstract

published in *FASEB**Journal 26*: 865.16, 2012] ***Poster***

Bahls, M., Sheldon, R.D., Taheripour, P., Clifford, K.A., Foust, K.B., Cabot, R.A., and

**Newcomer, S.C.** (2012, April). Maternal exercise during pregnancy alters vascular smooth

muscle relaxation in offspring. Presented at ExperimentalBiology Annual Meeting, San Diego,

CA. [Abstract published in *FASEB**Journal 26*: 1138.6, 2012] ***Poster***

Foust, K., Cabot, R., Bidwell, C., Bahls, M., Sheldon, R., Taheripour, P., and **Newcomer, S.C.**

(2011, August) Maternal exercise leads to altered vascular endothelial function in female porcine

offspring. Presented at the Society for the Study of Reproduction Annual Meeting. Portland,

OR. [2011] ***Poster***

Roseguini, B.T., Sheldon, R., Crist, B., Thyfault, J., Laughlin, M.H., and **Newcomer, S.C.**

(2011, June) Acute effects of intermittent pneumatic compression on skeletal muscle gene

expression in humans. Presented at American College of Sports Medicine National Meeting,

Denver, CO. [Abstract published in *Medicine and Science* *in Sport and* *Exercise*, 43(5):466 ,

2011] ***Poster***

Claxton, L.J.,Haddad, J.M., Ryu, J.H., Ponto, K., & **Newcomer, S**. (2011, June)  Newly

standing infants exhibit more complex center of pressure patterns when engaging in a supra

postural task.  Presented at North American Society for the Psychology of Sport and Physical

Activity. Burlington, VT. [Abstract published in J*ournal of Sport* *& Exercise Psychology*, *33*,

S28, 2011]. ***Oral***

Roseguini, B.T., Arce-Esquivel, A.A., **Newcomer, S.C.**, and Laughlin, M.H. (2011, April)

Impact of a single session of intermittent pneumatic leg compression on skeletal muscle and

isolated collateral artery gene expression in rats. Presented at ExperimentalBiology Annual

Meeting, Washington, DC. [Abstract published in *FASEB* *Journal 25* :1092.23, 2011] ***Poster***

Arentson, E., Buhman, K.K., Cabot, R., **Newcomer, S**., Donkin, S.S. (2011, April) Maternal

exercise during pregnancy in swine programs gene expression in intestine of offspring.

Presented at ExperimentalBiology Annual Meeting, Washington, DC. [Abstract published in

*FASEB* *Journal 25* : 990.9 ,2011] ***Poster***

Claxton, L.J**.,** Haddad, J.M., Ponto, K., Ryu, J. H., & **Newcomer, S.** (2011, March).  Look I

can stand: the balance of newly standing infants may be better than it appears.  Presented at the

biennial meeting of the Society for Research in Child Development, Montreal, Canada. [2011]

***Poster***

Padilla, J., Whyte, J.J., **Newcomer, S.C.**, and Laughlin, M.H. (2010, June) Evaluating the

impact of retrograde shear stress on expression of pro-inflammatory genes in rat carotid artery.

Presented at American College of Sports Medicine National Meeting, Baltimore, MD. [Abstract

published in *Medicine and Science in Sport and Exercise*, 42(5):S302, 2010] ***Poster***

Bell, J.W., Roseguini, B.T., Sheldon, R., Stroup, A., Skarbek, I., Maurer, D. Laughlin, M.H., and

**Newcomer, S.C.** (2011, June) Four weeks of cyclic mechanical forearm compressions do not

alter resting brachial arteryhemodynamics. Presented at American College of Sports Medicine

National Meeting, Baltimore, MD. [Abstractpublished in *Medicine and Science in Sport and*

*Exercise*, 42(5):S245, 2010] ***Poster***

Padilla, J., Young, C.N., Simmons, G.H., Deo, S.H., **Newcomer, S.C.**, Sullivan, J.P., Laughlin,

M.H., and Fadel, P.J. (2010, April) Impact of increased muscle sympathetic nerve activity on

conduit artery shear patterns. Presented at ExperimentalBiology Annual Meeting, Anaheim, CA.

[Abstract published in *FASEB* *Journal* 24: 1020.13,2010] ***Poster***

Roseguini, B.T., Sheldon, R., Stroup, A., Bell, J.W., Skarbek, I., Maurer, D. Laughlin, M.H.,

and **Newcomer, S.C.** (2010, April) Impact of chronic intermittent forearm compressions on

blood flow capacity of humans. Presented at ExperimentalBiology Annual Meeting, Anaheim,

CA. [Abstract published in *FASEB* *Journal* 24:618.13,2010] ***Poster***

Bahls, M., Bidwell, C.A., Juan, H., Granada, J.F., Krueger, C.G., Reed, J.D., VanAlstine, W.G.,

and **Newcomer, S.C.** (2010, April) Gene expression differences in the brachial and femoral

arteries of Rapacz swine at birth arerelated to atherosusceptibility. Presented at Experimental

Biology Annual Meeting, Anaheim, CA. [Abstractpublished in *FASEB* *Journal* 24: 1039.1,

2010] ***Poster***

Roseguini, B.T., Soylu, S.M., Whytte, J., Yang, H.T., **Newcomer, S.C.**, Terjung, R.L., and Laughlin, M.H (2009, October). Acute effects of cyclic limb compression on mRNA expression of angiogenic factors in skeletal muscle. Presented at Central States ACSM Regional Chapter Annual Meeting. Columbia, MO.

Laughlin, M.H., **Newcomer, S.**, Bender, S., Arce, A. and McAllister, R. (2009, May). Differential effects of exercise training (EX) on endothelial phenotype in porcine conduit arteries and veins. Presented at American College of Sports Medicine National Meeting, Seattle, WA. [Abstract published in *Medicine and Science in Sport and Exercise* 41(5):S75, 2009] ***Poster***

Padilla, J., Johnson, D.B., **Newcomer, S.C.**, Wilhite, D.P., Mickleborough, T.D., Fly, A.D., Mather, K.J., and Wallace J.P. (2009, May). Adjusting Flow-mediated Dilation for Shear Stress Allows Detection of Endothelial Dysfunction in a Moderate-risk population. Presented at American College of Sports Medicine National Meeting, Seattle, WA. [Abstract published in *Medicine and Science in Sport and Exercise* 41(5):S77, 2009] ***Poster***

Arce-Esquivel A., **Newcomer, S.C.**, Turk J.R and Laughlin, M.H. (2009, May). Relationship between endothelial function and oxidative damage in hypercholesterolemic pigs. Presented at American College of Sports Medicine National Meeting, Seattle, WA. [Abstract published in *Medicine and Science in Sport and Exercise* 41(5):S74, 2009] ***Poster***

Tinken, T.M., Thijssen, D.H.J., Hopkins, N.D., Dawson, E.A., **Newcomer, S.C.**, Black, M.A., Laughlin, M.H., Cable, N.T. and Green, D.J. (2009, May). Does the pattern of shear rate, or mean shear rate, dictate flow mediated dilation (FMD) in humans. Presented at American College of Sports Medicine National Meeting, Seattle, WA. [Abstract published in *Medicine and Science in Sport and Exercise* 41(5):S49, 2009] ***Poster***

Laughlin, M.H., **Newcomer, S.**, Bender, S., Arce, A. and McAllister, R. (2009, April).

Endothelial phenotype is not the same among porcine conduit arteries and veins. Presented at

Experimental Biology Annual Meeting, New Orleans, LA. [Abstract published in *FASEB*

*Journal* 23: 965.6,2009] ***Poster***

**Newcomer, S.,** Roseguinin, B., Arce Esquivel, A., Bender, S., Turk, J. and Laughlin, H. (2008, April). Effects of endurance exercise training on endothelial function and atherosclerosis in the hereditary hypercholesterolemic swine model. Presented at Experimental Biology Annual Meeting, San Diego, CA. [Abstract published in *FASEB Journal* 22: 1119.6,2008.] ***Poster***

**Newcomer, S.,** Hsu, C., Caron, N., Ingram, D., Roseguinin, B., and Laughlin, M.H. (2008, April). No change in endothelium-dependent relaxation or morphology of peripheral arteries following 30 days of aortic coarctation. Presented at Experimental Biology Annual Meeting, San Diego, CA. [Abstract published in *FASEB Journal* 22: 1119.8,2008.] ***Poster***

McAllister, R.M., Johnson, R.L., **Newcomer, S.C.**, and Laughlin, M.H. (2007, April). Effects of chronic nitric oxide synthase (NOS) inhibition on renal blood flow. Presented at Experimental Biology Annual Meeting, Washington, DC. [Abstract published in *FASEB Journal* 21(5): A498, 2007.] ***Poster***

**Newcomer, S.C.,** Bowles, D.K., and Laughlin, M.H. (2007, April). Shear rates in the brachial and femoral arteries of swine. Presented at Experimental Biology Annual Meeting, Washington, DC. [Abstract published in *FASEB Journal* 21(6): A1369, 2007.] ***Poster***

**Newcomer, S.C.**, Taylor, J.C., and Laughlin, M.H. (2007, April). Alpha-adrenergic responsiveness of porcine forelimb and hindlimb vasculatures. Presented at Experimental Biology Annual Meeting, Washington, DC. [Abstract published in *FASEB Journal* 21(6): A1370, 2007.] ***Poster***

**Newcomer, S.C.** and Laughlin, M.H. (May, 2007). Similar effects of exercise on endothelium-dependent relaxation in brachial and femoral arteries of hypercholesterolemic swine. Presented at American College of Sports Medicine National Meeting, New Orleans, LA. [Abstract published in *Medicine and Science in Sport and Exercise* 39(5):S272, 2007.] ***Poster***

Bender, S.B., **Newcomer, S.C.,** Morris, R.T., and Laughlin, M.H. (2007, August). Inactivity selectively reduces acetylcholine vasodilation of type II diabetic skeletal muscle feed arteries. Presented at Eighth World Congress for Microcirculation, Milwaukee, WI. [Abstract published in *Microcirculation* 14(4-5): 532, 2007.] ***Poster***

**Newcomer, S.C.**, Laughlin, M.H., and McAllister, R.M. (2006, April). Chronic administration of NG-nitro-L-arginine methyl ester (L-NAME) on endothelium-dependent relaxation of porcine brachial and femoral arteries. Presented at Experimental Biology Annual Meeting, San Francisco, CA. [Abstract published in *FASEB Journal* 20(5): A1400, 2006.] ***Poster***

**Newcomer, S.C.** and Laughlin, M.H. (2006, April). Contribution of nitric oxide (NO) and prostacyclin (PGI2) to endothelium-dependent relaxation of porcine brachial and femoral arteries. Presented at Experimental Biology Annual Meeting, San Francisco, CA. [Abstract presented in *FASEB Journal* 20(5): A1401, 2006.] ***Poster***

**Newcomer, S.C.**, Taylor, J.C. and Laughlin, M.H. (2006, April). Vasorelaxation responses of porcine forelimb and hindlimb vasculatures. Presented at Experimental Biology Annual Meeting, San Francisco, CA. [Abstract presented in *FASEB Journal* 20(5): A1401, 2006.] ***Poster***

McAllister, R.M., Eklund, Harah, D.W., Jankord, R.D., Johnson, R.L., Melloh, A.J., **Newcomer, S.C.**, Price, E.M., Tanner, M.A., Taylor, J.C., Thorne, P.K., Latchman, S.L., and Laughlin, M.H.(2006, April). Effects of chronic nitric oxide synthase (NOS) inhibition on responses to acute exercise. Presented at Experimental Biology Annual Meeting, San Francisco, CA. [Abstract published in *FASEB Journal* 20(5): A1403, 2006.] ***Poster***

Leuenberger, U.A., Hogeman, C.S., Handly, B.D., and **Newcomer, S.C.** (2005, April). Do prostaglandins contribute to hypoxia-induced skeletal muscle vasodilation in humans? Presented at Experimental Biology Annual Meeting, San Diego, CA. [Abstract published in *FASEB Journal* 19(4): A715, 2005.] ***Poster***

**Newcomer, S.C.**, Leuenberger, U.A., Hogeman, C.S., and Proctor, D.N. (2005, April). Limb differences in vascular function: effects of age and endurance training. Presented at Experimental Biology Annual Meeting, San Diego, CA. [Abstract published in *FASEB Journal* 19(4):A715-A716, 2005.] ***Poster***

**Newcomer, S.C.**, Hogeman, C.S., Handly, B.D., Leuenberger, U.A., and Proctor, D.N. (2004, April). Vasodilator responses to endothelial and vascular smooth muscle agonists in humans are limb-specific. Presented at Experimental Biology Annual Meeting, Washington, DC. [Abstract published in *FASEB Journal* 18(5):A1213, 2004.] ***Poster***

Koch , D.W., **Newcomer, S.C.**, Le, K.U., Smithmyer, S.L., Leuenberger, U.A., and Proctor, D.N. (2004, April). Evidence of peripheral and central limitations to systemic VO2 during peak exercise in older women. Presented at Experimental Biology Annual Meeting, Washington, DC. [Abstract published in *FASEB Journal* 18(4):A356, 2004.] ***Poster***

Proctor, D.N., **Newcomer, S.C.**, Koch, D.W., Le, K.U., and Leuenberger, U.A. (2003, April). Leg vasodilation during submaximal exercise is attenuated in healthy older women. Presented at Experimental Biology Annual Meeting, San Diego, CA. [Abstract published in *FASEB Journal* 17(5):A1260, 2003.] ***Poster***

Koch , D.W., **Newcomer, S.C.**, Le, K.U., MacLean, D.,Leuenberger, U., and Proctor, D.N. (2002, April). Does aging attenuate functional sympatholysis? Presented at Experimental Biology Annual Meeting, New Orleans, LA. [Abstract published in *FASEB Journal* 16(5):A764, 2002.] ***Poster***

**Newcomer, S.**, Le, K., Koch, D., Leuenberger, U., and Proctor, D. (2001, May). Influence of age on leg VO2 determinants during large muscle dynamic exercise. Presented at American College of Sports Medicine National Meeting, Baltimore, MD. [Abstract published in *Medicine and Science in Sport and Exercise* 33(5):S209, 2001.] ***Poster***

Le, K., **Newcomer, S.**, Koch, D., Leuenberger, U., and Proctor, D. (2001, May). Leg blood flow during large muscle dynamic exercise: influence of sedentary aging. Presented at American College of Sports Medicine National Meeting, Baltimore, MD. [Abstract published in *Medicine and Science in Sport and Exercise* 33(5):S209, 2001.] ***Poster***

Quintela, E., **Newcomer, S.C.**, Leek, B., and Richardson, R.S. (2000, May). Citrate synthase activity in skeletal muscle: Response to acute exercise. Presented at American College of Sports Medicine National Meeting, Indianapolis, IN. [Abstract published in *Medicine and Science in Sport and Exercise* 32(5):S320, 2000.] ***Poster***

Entin, P.L., **Newcomer, S.C.**, and Wagner, P.D. (2000, April). Exercise-induced up-regulation of skeletal muscle VEGF and mRNA is the same in old and young rats. Presented at Experimental Biology Annual Meeting, San Diego, CA. [Abstract published in *FASEB Journal* 14(4):A324, 2000.] ***Poster***

Richardson, R.S., **Newcomer, S.C.**, and Noyszewski, E.A. (2000, April). Muscle intracellular PO2, Response to graded exercise test. Presented at Experimental Biology Annual Meeting, San Diego, CA. Abstract published in *FASEB Journal* 14(4):A324, 2000.] ***Poster***

# Invited scholarly presentations

**Newcomer, S.C.** and Nessler, J.(2014, July). Physiological and biomechanical characterization

of recreational surfers. University of the Third Age, University of San Diego, San Diego, CA.

**Newcomer, S.C.** (2012, November). Impact of maternal nutrition and exercise during

pregnancy on the vascular health of offspring. Kinesiology Seminar, Michigan State University,

East Lansing, MI.

**Newcomer, S.C.** (2011, February). Investigations into Cardiovascular Disease. Chronic

Disease Seminar, Purdue University, West Lafayette, IN.

**Newcomer, S.C.** (2010, December). Effects of maternal exercise on the atherosclerotic

susceptibility of offspring. Ingestive Behavior Seminar, Purdue University, West Lafayette, IN.

**Newcomer, S.C.** (2010, November) Influence of gene expression on the development and progression of atherosclerosis. 2010 Showalter Trustee Visit. Purdue University, West Lafayette, IN.

**Newcomer, S.C.** (2010, June). Mechanisms underlying the heterogeneous distribution of

atherosclerosis. Symposium on Cardiovascular Pathology, School of Veterinary Medicine.

Purdue University, West Lafayette, IN.

**Newcomer, S.C.** (2009, September). Are all peripheral arteries created equal? An examination

of mechanisms underlying limb differences in atherosclerosis. Animal Science Seminar Series.

Purdue University. West Lafayette, IN.

**Newcomer, S.C.** (2009, September). Mechanisms underlying the heterogeneous distribution of

atherosclerosis in the peripheral circulation. INP Seminar Series. Purdue University, West

Lafayette, IN.

**Newcomer, S.C.** (2008, September). Mechanisms underlying the heterogeneous distribution of

atherosclerosis in the peripheral circulation. Basic Medical Sciences Seminar Series. Purdue

University, West Lafayette, IN.

**Newcomer, S.C.** (2008, February). Mechanisms underlying the heterogeneous distribution of

atherosclerosis in the peripheral circulation. Health and Kinesiology Colloquium. Purdue

University, West Lafayette, IN.

**Newcomer, S.C.** (2005,November). The clinical significance of limb differences in vascular

function. Kinesiology Seminar Series. University of Illinois Chicago, IL.

**Newcomer S.C.** (2005, September). Are all peripheral vasculature created equal? An

examination of peripheral vascular function in the upper and lower extremities of humans.

Cardiology Grand Rounds. University of Missouri, School of Medicine. Columbia, MO.

**Newcomer, S.C.** (2005, February). Limb differences in vascular function: effects of age and

endurance training. Cardiovascular Days. University of Missouri, Columbia, MO.

**Newcomer, S.C.** (2004, August ). Limb differences in vascular function: effects of age and

endurance training. Biomedical Sciences Seminar Series. University of Missouri. Columbia,

MO.

# Pending and Funded External Grants

**Agency:** American Heart Association

**Title:** *Effects of maternal exercise during pregnancy on cardiovascular disease susceptibility of offspring throughout life*

**Duration of funding:** 4 year (1/1/2012–12/30/2015)

**Amount of Award:** $308,000 (Funded)

**Role:** Principal Investigator

**Agency:** Dairy Research Institute

**Title:** *Does high calcium exacerbate atherosclerosis?*

**Duration of funding:** 1.5 year (5/1/2012–9/30/2013)

**Amount of Award:** $110,000 (Funded)

**Role:** Co-Investigator

**Agency:** American College of Sports Medicine

**Title:** *Impact of external mechanical compression on skeletal muscle gene expression and blood flow capacity*

**Duration of funding:** 1 year (7/1/2010 –6/30/2011)

**Amount of Award:** $9,971 (Funded)

**Role:** Principal Investigator

**Agency:** Showalter Trust Award

**Title:** *Influence of gene expression on the development and progression of atherosclerosis.*

**Duration of funding:** 1 year (7/1/2009 – 6/30/2011)

**Amount of Award:** $75,000 (Funded)

**Role:** Principal Investigator

**Agency:** National Institutes of Health (NHLBI)

**Title:** *Influence of blood pressure on PAD distribution.* (NRSA; Laughlin – Sponsor)

**Duration of funding:** 1 year (6/1/2006-6/1/2007)

**Amount of Award:** $63,408 (Funded)

**Role:** Principal Investigator

**Pending and Funded Internal Grants**

**Agency:** University Professional Development Grant

**Title:** *Impact of pregnancy and exercise on postpartum maximal oxygen consumption*

**Duration of funding:** (7/1/2013-6/15/2014)

**Amount of Award:** $3,000 (Funded)

**Role:** Principal Investigator

**Agency:** Faculty Center Professional Development Grant

**Title:** *Effects of maternal exercise during pregnancy on cardiovascular outcomes of offspring*

**Duration of funding:** (5/28/2013-6/1/2013)

**Amount of Award:** $1,000 (Funded)

**Role:** Principal Investigator

**Agency:** Clinical and Translational Science Institute (Purdue Development Team)

**Title:** *Exercise and Vitamin D Exposure during the Lifespan on Breast Cancer Risk*

**Duration of funding:** 1 year (3/1/2012-2/28/2012)

**Amount of Award:** $10,000 (Funded)

**Role:** Co-Investigator

**Agency:** Purdue Research Foundation Research Grant Program

**Title:** *The effects of maternal exercise during pregnancy on NO/sGC/PKG1 signaling in offspring.*

**Duration of funding:** 1 year (6/1/2012 - 5/31/2013)

**Amount of Award:** $16,795 (Funded)

**Role:** Principal Investigator (on behalf of M. Bahls)

**Agency:** Purdue Research Foundation Research Grant Program

**Title:** *Prevalence of peripheral arterial disease in individuals with spinal cord injury*

**Duration of funding:** 1 year (6/1/2010 - 5/31/2011)

**Amount of Award:** $16,795 (Funded)

**Role:** Principal Investigator (on behalf of J. Bell & M. Bahls)

**Agency:** Discovery Park Undergraduate Internship Program

**Title:** *Development of a pump that simulates in vivo hemodynamics*

**Duration of funding:** 3 months (9/2009 - 12/2009)

**Amount of Award:** $500 (Funded)

**Role:** Principal Investigator

**Agency:** Clinical and Translational Science Institute (Purdue Development Team)

**Title:** *Prevalence of peripheral arterial disease in individuals with spinal cord injury*

**Duration of funding:** 1 year (10/1/2009 - 9/30/2010)

**Amount of Award:** $6,000 (Funded)

**Role:** Principal Investigator

**Agency:** Purdue Research Foundation Research Grant Program

**Title:** *Prevalence of peripheral arterial disease in individuals with spinal cord injury*

**Duration of funding:** 1 year (6/1/2009 - 5/31/2010)

**Amount of Award:** $16,795 (Funded)

**Role:** Principal Investigator (on behalf of J. Bell)

**Agency:** College of Veterinary Medicine Faculty Research Award

**Title:** *Influence of blood pressure on peripheral arterial disease distribution*

**Duration of funding:** 1 year (1/1/2006 – 12/31/2006)

**Amount of Award:**$18,000 (Funded)

**Role:**Co-Investigator (not eligible to be PI due to post doctoral status)

### SERVICE

**Department**

* 1. Movement and Sports Sciences Strategic Planning Curriculum Committee

2009-2010 Ph.D. Qualifying Examination Team

* 1. (Chair) Corrigan Professional Development Grant Committee
  2. Movement and Sports Sciences Curriculum Committee

2008-2009 (Panel Member) Graduate Student Organization Panel Discussion on Getting a Job in Academia

* 1. Ph.D. Qualifying Examination Team

2007-2008 Student Purdue Research Foundation Grant Reviewer

**College**

2013-2015 Curriculum and Academic Policy Committee

2013 Fall Academic Reinstatement Committee

2012 Interdisciplinary Graduate Program Project Award Reviewer

2012 Interdisciplinary Nutrition Program Graduate Application Reviewer

2011 HHS Working Group on Research and Graduate Education

2011 Organizing Committee-Interdisciplinary Nutrition Program Seminar

2011 Faculty Search Committee – Foods and Nutrition

2010- 2012 Organizing Committee – HHS Chronic Disease Research Interest Group

2009- 2012 Advisory Committee – Bone-Body Composition CTSI Core

**University**

2015 Campus Connect Selection Committee Member (May/June)

2015 Freshman For a Day Instructor (Spring Semester)

2014 Guest Speaker at President Haynes University Council (November 20, 2014)

2014-2015 Campus Connect Participant

2013-present CSUSM Institutional Animal Care and Use Committee

2013 Guest Speaker Campus Connect (November 4,2013)

2013 Guest Speaker Bridges Open House (October 11, 2013)

**Community**

2014-Present Encinitas Union School District Health and Wellness Representative

2014-Present Ocean Knoll Elementary School VP of Health and Welfare

2014-Present Scientific Advisory Committee Healthy Women Healthy Children

2013-2014 Director of CSUSM’s Walking for Two Program

2013-2014 Director of Research and Program Development for Healthy Women Healthy

Children

# Professional

2011-2012 Editorial Board for *Journal of Applied Physiology*

2004-present Reviewer *American Journal of Physiology – Heart and Circulatory Physiology* 2004-present Reviewer *Journal of Applied Physiology*

2004-present Reviewer *Medicine and Science in Sports and Exercise*

2004-present Reviewer *Experimental Physiology*

2004-present Reviewer *Exercise and Sports Science Reviews*

2004-present Reviewer *International Journal of Neuroscience*

## Fellowships, Awards, and Honors

2006-2007 Post Doctoral Fellowship, National Institutes of Health, National Heart Lung and

Blood Institute

2004-2006 Post Doctoral Fellowship, National Institutes of Health, National Institute of

Arthritis and Musculoskeletal and Skin Diseases

2005 American Physiological Society, Caroline tum Suden/Frances Hellebrandt

Professional Opportunity Award

2004 2ND Place at Pennsylvania State University Graduate Exhibition

2004 American Physiological Society, Caroline tum Suden/Frances Hellebrandt

Professional Opportunity Award

2000 Pre Doctoral Fellowship, National Institutes of Health, National Institute of Aging

1996 Phi Kappa Phi Honor Society